REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claims 29-43 are being added.

This amendment adds claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-43 are now pending in this application.

Rejection of Claims 1-28 based on Granfors et al. alone, or further in view of Graham et al.

Claims 1-3, 5, 8-12, 14, 17-21, 23, and 26-28 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,657,400 to Granfors et al. Claims 4, 13, and 22 were rejected under 35 U.S.C. 103(a) as being unpatentable over Granfors et al. Claims 6, 7, 15, 16, 24, and 25 were rejected under 35 U.S.C. 103(a) as being unpatentable over Granfors et al. in view of U.S. Patent No. 5,821,915 to Graham et al. As discussed in detail below, neither Granfors et al. alone nor Graham et al. alone, nor their combination teach, disclose, or suggest all of the limitations of the claims.

Claim 1

Claim 1 recites "providing a correction value based on the local gradient to correct the defective pixel." Granfors et al. does not teach using a local gradient as a basis of a correction value which is provided to correct a defective pixel. Rather, Granfors et al. teaches that a defective pixel "would be assigned one of the following pixel values or combinations of pixel values, based on the designations shown in FIG. 3: (E+W)/2; (N+S)/2; (NW+SE)/2; (NE+SW)/2; N; S; E; W; NE; NW; SE; SW." Col. 4, lines 38-46. The discussion found in Col. 3, line 65 to Col. 4, line 11 of Granfors et al. is directed to identifying bad pixels, not to determining the correction value to be used for that bad pixel. Since Granfors et al. fails to

teach each of the limitations found in Claim 1, Granfors et al. does not anticipate Claim 1. Claims 2, 3, 5, and 8 depend from Claim 1 and are believed to be allowable for at least the same reason as Claim 1.

Claim 4 depends from Claim 1 and contains all of the limitations of Claim 1. Using a gradient as a basis for a correction value is not an obvious variation on the method taught in Granfors et al. at Col. 4, lines 38-46. The method taught in Granfors et al. is a simple linear averaging of two points and does not take into account, or suggest taking into account, the gradients in the vicinity of the defective pixel. This difference in quality can be seen in the figures of the present application. Thus, Granfors et al. does not render Claim 4 obvious.

Claims 6 and 7 depend from Claim 1 and contain all the limitations of Claim 1. The Office Action relies on Granfors et al. for teaching "providing a correction value based on the local gradient to correct the defective pixel." As discussed above, Granfors et al. does not teach or suggest this limitation. Further, Graham et al. does not remedy the deficiency of Granfors et al. Graham et al. does not disclose using local gradient comprising an array of local gradient matrix elements as a basis for a correction value. Thus, Granfors et al. in view of Graham et al. does not render Claims 6 and 7 unpatentable.

Claim 10

Claim 10 recites "a processor... configured to... generate a correction value based on the local gradient". Claim 10, and Claims 11-18 which depend from Claim 10 are believed to be allowable for similar reasons as discussed above for Claims 1, 4 and 6.

Claim 19

Claim 19 recites "means for providing a correction value based on the local gradient to correct the defective pixel." Claim 19, and Claims 20-28 which depend from Claim 19 are believed to be allowable for similar reasons as discussed above for Claims 1, 4 and 6.

New Claims 29-36

New Claims 29-36 find support in the original specification at at least Claims 1-8, and page 4, lines 9-13.

Claim 29 recites "providing a correction value, which is based on the local gradient, to correct the defective pixel." Claims 29-36 have limitations similar to those found in Claim 1 and are believed to be allowable for at least the same reasons as Claim 1.

New Claims 37-43

New Claims 37-43 find support in the original specification at at least Claim 1; page 4, lines 9-13; page 7, lines 17-21; and page 8, lines 27-29. New Claim 37 recites "analyzing global characteristics of pixels in a proximity of the defective pixel." One such global characteristic is the gradient of the pixels. Other global characteristics could include a weighted average of the values of the pixels, a weighted average of the gradients of the area located around the defective pixel, and other characteristics of the image around the defective pixel which require more than merely the pixels immediately surrounding the defective pixel to identify. This concept is discussed in the present patent application at at least page 8, lines 10-28.

Claim 37 recites "correcting the defective pixel based on the global characteristics." Ganfors et al. does not teach or suggest correcting the defective pixel based on global characteristics of pixels that are in proximity of the defective pixel. Rather, Ganfors et al. teaches using, at most, a linear average of the values of only two pixels which directly border the defective pixel. Col. 4, lines 38-46. Further, no other reference is believed to teach this element of Claim 37. Graham et al. is directed to correcting a problem caused when a picture which had been printed by a half tone process is scanned by a scanner. Graham et al. is not directed to correcting a defective input at a pixel of a detector. Claims 38-43 recite additional elements not found in the references and are believed to add additional grounds for patentability. Accordingly, Claims 37-43 are believed to be in condition for allowance.

Conclusion

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.
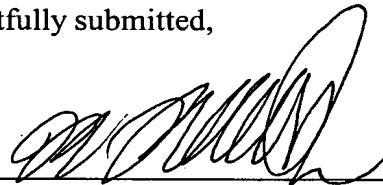
The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 07-0845. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 07-0845. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 07-0845.

Respectfully submitted,

Date _____ 8-4-03 _____   By _____

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